

Work Order ID 87015

87015

Page 1

Monday, July 09, 2012 3:51:17 PM

Item ID: D350-636-013

Accept

N9000040100

Setup Start ***NS1***

Revision ID:

Item Name: Skidtube LH

Stop ***NS2***

Start Date: 7/10/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/24/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: *MLJ*

Date: *12/07/10* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								
IIN-D350-636	I								

100

100

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy blue file and type labels per PPP D350-636-013 CHG 006

0.00

0.00

for MLJ 12-7-26

1 87015

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action * Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

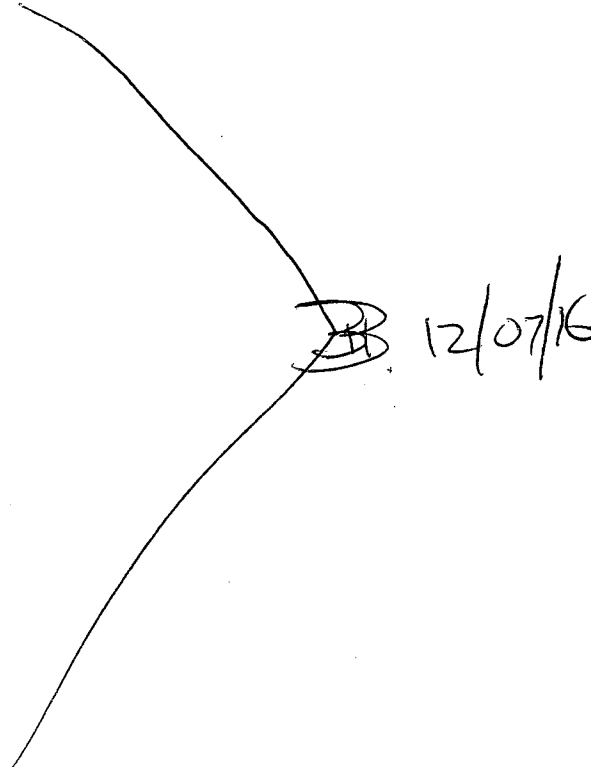
6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-3 details). Drill using drill Jig DT8150 & DT8864A for first side only DT8864B for second side (detail B)

7- Clecko DT8864B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8- Open up holes for SECTION AW-AW to 0.375" (2 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open holes for ground handling and detail T to 0.500" (8 holes per side)

9- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10- Open up holes of Detail A to 0.297" (total of 2 holes per side)


12/07/16

W/O:

WORK ORDER CHANGES

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Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004A/R Aluminum Rod batch: M122B30B6 12/07/10

12-Grind welds flush as per Dwg D2750

BB 12/07/10

120

QC10- Inspect visual per QSI004- ground welds

0.00

120

QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Date:

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QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

1 7/9 12-7-18

150

QC7-Inspect Chemical Conversion Coat

0.00

150

QC

Memo

0.00

Quality Control

DP 12-7-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Date:

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Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes section AW-AW 0.500" (4 per side) as per dwg D2750

3-Open up holes of Detail T and ground handling to 0.625" (total of 8 holes per side Detail AV-AV) as per dwg D2750.

4-Chamfer holes of section AW-AW, AV-AV, T and ground handling. (welding instructions on sheet 10)

5-Deburr and blow out all chips from inside of tube. Prepare tube for welding, remove alodine as required.

6-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291

batch: 122130exp. date: 13-3-14

DC 12/07/18

7- Weld spacers D3490-1, D3490-5 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 10)

A/R Aluminum Rod batch: M12280

BR 12/07/19

8-Grind welds flush as per Dwg D2750

BB 12/07/19

9-Spot face ground handling holes (total of 4 places per side) as per dwg D2750

BB 12/07/23

10-Deburr holes

W/O:		WORK ORDER CHANGES					
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Process Plan:

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Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

190

Pressure Wash per QSI005 4.3

0.00

190

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

DAS
16
8-63

12/17/23

DAS
16
8-63

12/17/23

M/L
12/17/23

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Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
Code Accept Reject Reject Insp.
Qty Qty Number Stamp

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

200

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

210

QC3- Inspect Part Finish

0.00

210

QC

Quality Control

Memo

Inspect for foreign object per QSI 024

0.00

220

HandFinishing

0.00

220

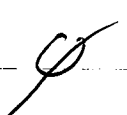
HandFinish



Hand Finishing



Memo

I-Install inserts as per dwg D2750

0.00

1X  12/07/24

1 LH   12/07/25

1 LH   12/07/25

m121841

8:50
3200 F
9:20

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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1

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Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

0.00

230

HandFinishing

HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 122130

EXP DATE: 14/02

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 40348

5-Coat all exposed fasteners with "LPS Procyon" batch: 14596

1 LK & OP 12/07/25

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00

Quality Control

DAS
16
9-89

12/1/24

W/O:		WORK ORDER CHANGES					
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Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

1K

12-7-27

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.00

Quality Control

DAS
15
9-89

17/4/27

10

270

Packaging

0.00

270

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-013

I

12/7/27

W/O:		WORK ORDER CHANGES					
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QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan Accept Reject Reject Insp.
Code Qty Qty Number Stamp

280

QC21- Final Inspection - Work Order Release

0.00

280

QC

Memo

0.00

Quality Control

12/7/30

MLJ 12/07/27

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item Name: Skidtube LH

Start Date: 7/10/2012

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Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:H02.09.25Rearranged procedure steps KJ
 IPP rev I 06.03.30 Per rev. D dwg EC
 IPP Rev:J 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC
 IPP Rev:K 08-09-23 revF as per dwg DD verified by:ec IPP Rev:L 10.06.22 revise seq110
 DD verf:EC IPP Rev:M 10.10.01 as per IIN revH DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS4-1032-225

Purchased

No

230

Each

2,888.0000

38

38

Insert

Location

Loc Qty

Loc Code

FP-B

2445

122290 ✓

2445

ST281

420

108696

146

110768

62

118386

55

118966

68

121269

89

ST282

23

120410

10

120451

13

38

28

12/07/25

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Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C5A Purchased No 230 Each 1,611.0000 34 34 34 12/07/25

Location	Loc Qty	Loc Code
FP001	7	
115835	7	
ST350	1604	
116419	28	
117343	13	
117764	7	
117872	2	
119749	23	
120423	28	
121255 ✓	469	
121444	34	
121708	500	
122141	500	

AN3C6A Purchased No 230 Each 285.0000 4 4 4 12/07/25

Location	Loc Qty	Loc Code
FP001	1	
111982	1	
ST351	284	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	13	
119449	21	
120423	3	
120693	118	
121682 ✓	74	

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Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

AN6C44A Purchased No 230 Each 104.0000

BOLT

4 4 12/07/25

Location	Loc Qty	Loc Code
FG	2	
103964	2	
ST343	102	
121013	11	
121440	41	
122204	50	

AN8C21A Purchased No 250 Each 77.0000

BOLT

2 2 12/07/25

Location	Loc Qty	Loc Code
ST343	77	
118758	3	
121275	24	
122204	50	

AN8C35A Purchased No 230 Each 61.0000

BOLT

1 1 12/07/25

Location	Loc Qty	Loc Code
FP002	60	
115960	1	
118286	9	
121275	50	
ST346	1	
114442	0	
115188	0	
115960	1	

AN960C10L washer * NAS1149C0332R Purchased No 230 Each 21.0000

38 38 12/07/25

Location	Loc Qty	Loc Code
ST	21	
107534	21	

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 4

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110 Each 33.0000

Extrusion Bent

1 1 ~~12/07/14~~

Location	Loc Qty	Loc Code
LG	33	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
81330	4	
83305	1	
86330	17	

D2739

Manufactured No

160 Each 14.0000

350 I Beam

1 De 12/07/18
①

Location	Loc Qty	Loc Code
LG	14	
72155	1	
81508	1	
83448	2	
83548	1	
85486	5	
86615	4	

D2741

Manufactured No

250 Each 34.0000

Blade, 350 Skidtube

1 1 Sop 12-7-26
h
1x

Location	Loc Qty	Loc Code
ST	-10	
ST466	44	
71856	1	
83135	33	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 5

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D2743
Crossbolt Spacer

Manufactured No

220 Each 152.0000 8 8

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	78	
81965	23	
83262	55	
LG001	74	
67766	4	
68251	3	
73403	64	
74445	1	
79517	2	

BL 12/07/19
8 85459 v3

D2744
Cap

Manufactured No

160 Each 60.0000 1 1

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	60	
62715	1	
83412	21	
85506	38	

BL 12/07/16

D2745
Bushing

Manufactured No

230 Each 258.0000 8 8

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	206	
79518	6	
85416 ✓	200	
FP001	52	
69529	1	
76142	1	
83260	50	

8 8 12/07/25

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Page 6

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D3488-041
Blade Fitting Assembly, LH

Manufactured No

230 Each 29.0000

1 1 12/07/25

Location	Loc Qty	Loc Code
FP001	12	
85807 ✓	12	
FP002	17	
83407	10	
85733	7	

D3490-1
Cross Bolt Spacer

Manufactured No

160 Each 79.0000

4 4 BE12/07/19

Location	Loc Qty	Loc Code
LG	68	
81976	2	
85419	66	
LG001	11	
62450	2	
74875	4	
77042	3	
83269	2	

D3490-5
Cross Bolt Spacer

Manufactured No

160 Each 31.0000

4 4 BE12/07/19

Location	Loc Qty	Loc Code
LG001	31	
83373	31	

D3492-1
Plug

Manufactured No

230 Each 205.0000

8 8 12/07/25

Location	Loc Qty	Loc Code
FP002	198	
69531	8	
74444	2	
76235	4	
83259 ✓	184	
FP-A	7	
83098	7	

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr		Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

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Page 7

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D3492-5 Plug	Manufactured	No	230	Each	135.0000	8	8	12/07/25
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
			fpa	135				
			83100 ✓	34				
			83530	101				
D3493-1 Washer	Manufactured	No	110	Each	97.0000	2	2	SP
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
			ST050	97				
			77573	1				
			82023	2				
			83097	94				
D3535-25 Wearshoe	Manufactured	No	230	Each	32.0000	1	1	12/07/25
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
			FP001	32				
			62233	1				
			81357	1				
			83387	17				
			83899 ✓	13				
D3536-25 Gasket	Manufactured	No	230	Each	22.0000	1	1	12/07/25
			<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			
			FP	22				
			83391	6				
			83900 ✓	16				

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 8

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No 230 Each 112.0000

Wearpad

3 3 12/07/25

Location	Loc Qty	Loc Code
FP002	112	
81362	3	
83254	1	
83255	3	
83256	20	
85457 ✓	37	
85458	48	

D3631-1 Manufactured No 230 Each 283.0000

Washer

8 8 12/07/25

Location	Loc Qty	Loc Code
FG	268	
81874	2	
83588 ✓	266	
ST072	15	
68062	2	
75548	13	

D3791-1 Manufactured No 230 Each 26.0000

Wearplate

1 1 12/07/25

Location	Loc Qty	Loc Code
FP002	26	
62239	2	
83392 ✓	12	
83902	12	

D3793-1 Manufactured No 230 Each 26.0000

Wearshoe

1 1 12/07/25

Location	Loc Qty	Loc Code
FP001	26	
82171	2	
83393	11	
83903 ✓	13	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

D3793-3 Manufactured No 230 Each 28.0000 1 1 12/07/25

Wearshoe

Location	Loc Qty	Loc Code
FP001	28	
83394 ✓	16	
83901	12	

D3794-1

Gasket

Manufactured No

230 Each 24.0000

1 1 12/07/25

Location	Loc Qty	Loc Code
FP	4	
82167	4	
FP002	20	
83395 ✓	20	

D3794-3

Gasket

Manufactured No

230 Each 45.0000

1 1 12/07/25

Location	Loc Qty	Loc Code
FP	19	
83396 ✓	19	
FP002	26	
74530	2	
86243	24	

MS21043-6

NUT

Purchased No

230 Each 586.0000

4 4 12/07/25

Location	Loc Qty	Loc Code
FG	20	
103693	20	
ST301	566	
117887	2	
118384 ✓	64	
120308	500	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 10

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

230

Each

94.0000

1

1

NUT

1 12/07/25

Location

Loc Qty

Loc Code

304	39	
121185 ✓	22	
121349	17	
FP002	1	
115884	1	
ST303	4	
115884	0	
118077	1	
119309	2	
119638	1	
ST321	50	
122141	50	

MS21083C8

Purchased

No

250

Each

94.0000

2

NUT

803 12-7-26

Location

Loc Qty

Loc Code

304	39	
121185	22	
121349	17	
FP002	1	
115884	1	
ST303	4	
115884	0	
118077	1	
119309	2	
119638	1	
ST321	50	
122141	50	

2x

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 11

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0832R
WASHER

Purchased No

230 Each 250.0000

1

1 ~~OP~~ 12/07/25

Location

Loc Qty

Loc Code

ST297

250

114915 ✓

250

NAS1149D0863J
WASHER

Purchased No

250 Each 221.0000

2

2 SP 12/07/25

Location

Loc Qty

Loc Code

ST298

221

118078

34

119307

1

120308

86

121556

100

2X

NAS1515H3L
WASHER

Purchased No

230 Each 311.0000

4

4 ~~OP~~ 12/07/25

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

271

118686

3

120360

11

121556

57

122151

200

NAS1611-005
O-RING

Purchased No

230 Each 140.0000

8

8 ~~OP~~ 12/07/25

Location

Loc Qty

Loc Code

FP001

140

106099

18

114220 ✓

46

119438

36

121415

40

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 12

Work Order ID: 87015

Parent Item: D350-636-013

Parent Item Name: Skidtube LH

Start Date: 7/10/2012

Required Date: 7/24/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

416.0000

8

O-RING

8 8 12/07/25

Location

Loc Qty

Loc Code

FP001

416

110915

14

117460

8

118077

1

118612

3

119438

47

121259

2

121584

2

121723

39

122151✓

300

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

RELEASED

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEC 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	RAH	PORT HADLOCK, VA	
CHECKED	AS	DRAWING NO.	REV. F
MFG. APPR.	AS	D2750	SHEET 1 OF 11
APPROVED	AS	TITLE	SCALE
DE APPR.	AS	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1999 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

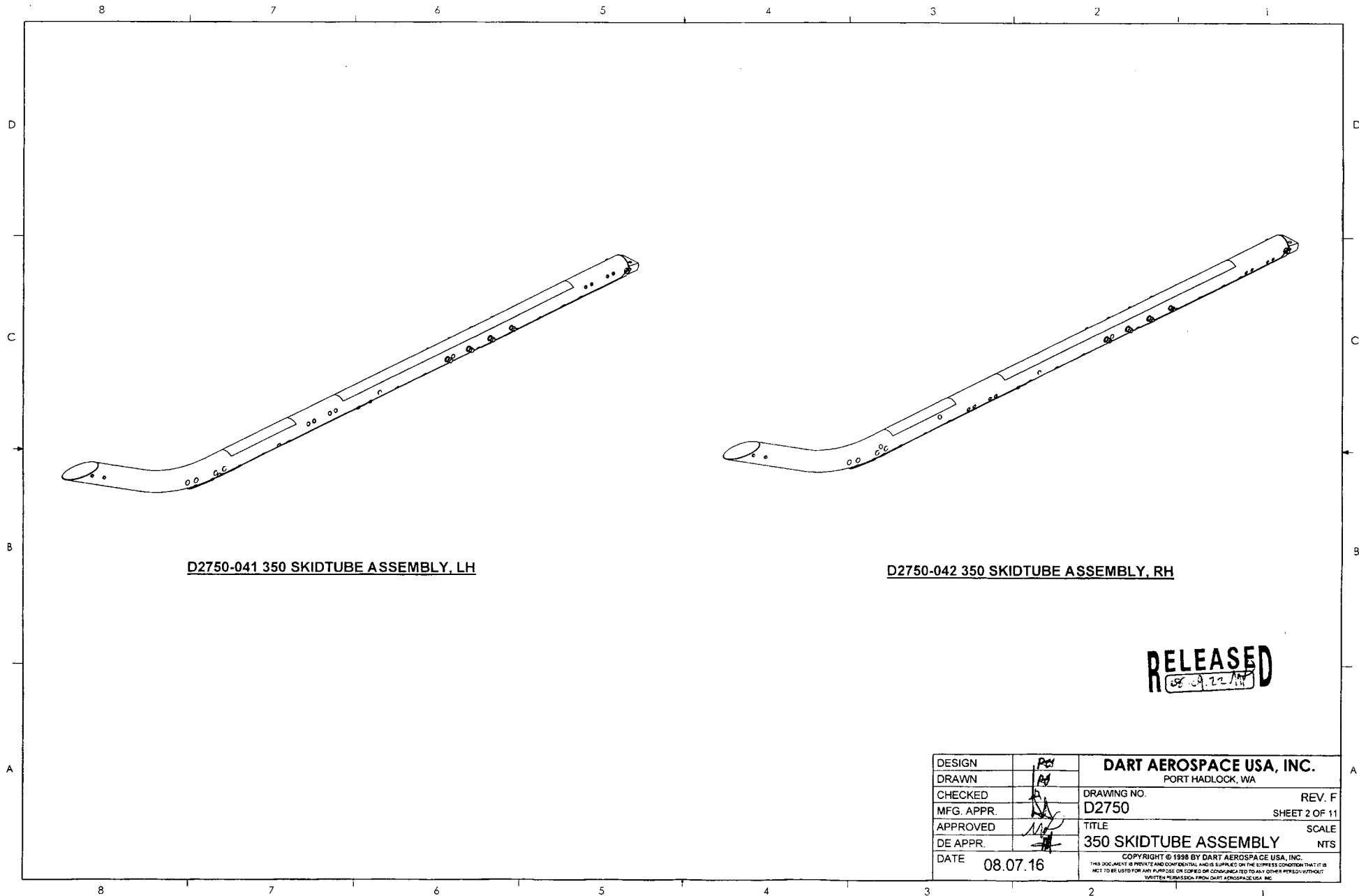
Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries



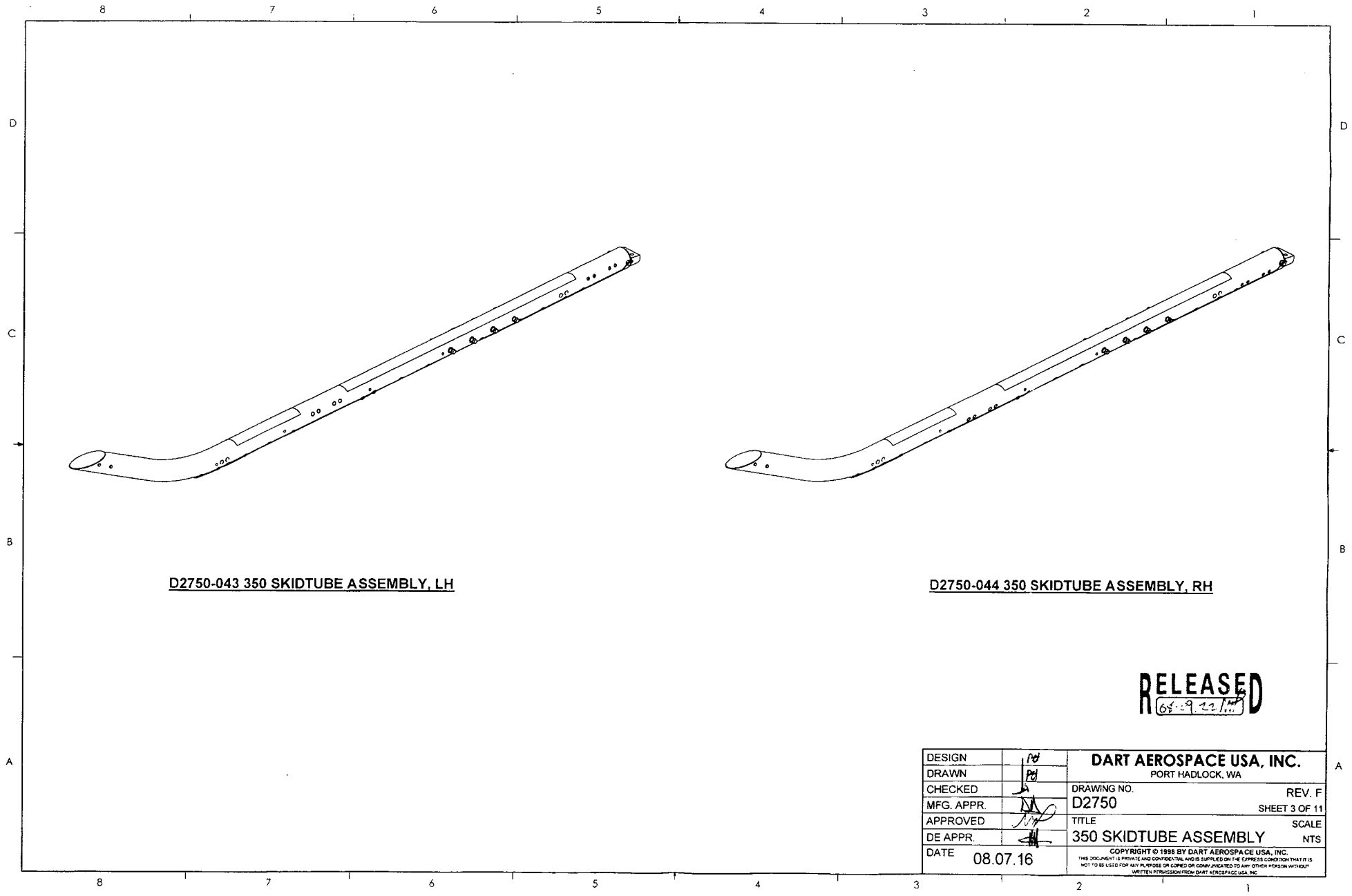
Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-043 350 SKIDTUBE ASSEMBLY, LH

D2750-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
68-9-22/100

DESIGN	PD	DART AEROSPACE USA, INC.	
DRAWN	PD	PORT HADLOCK, WA	
CHECKED	DA	DRAWING NO.	REV. F
MFG. APPR.	DA	D2750	SHEET 3 OF 11
APPROVED	DA	TITLE	SCALE
DE APPR.	DA	350 SKIDTUBE ASSEMBLY	NTS
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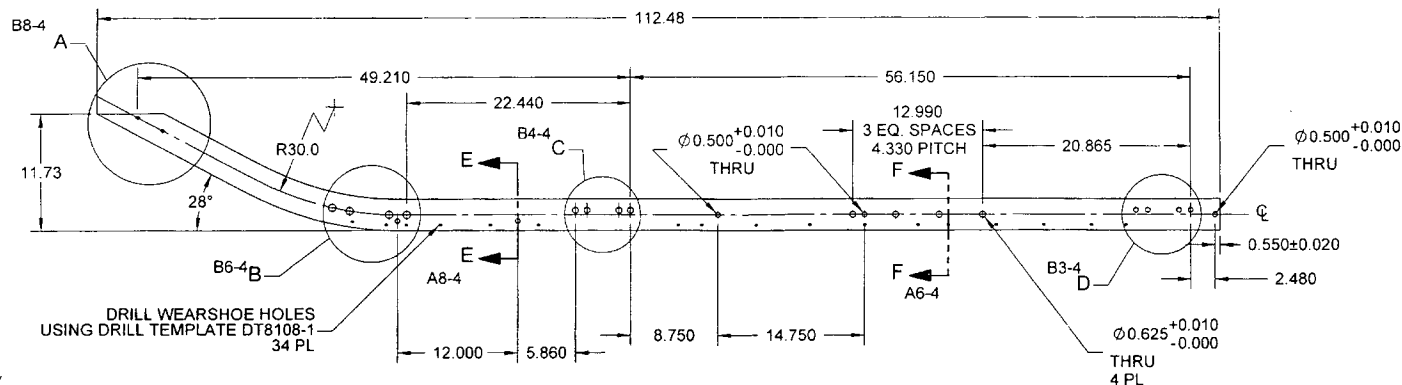
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

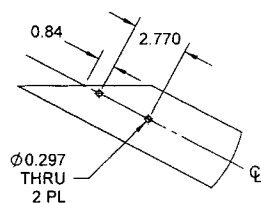
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

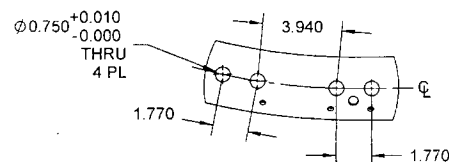
NOTE: Date & initial all entries



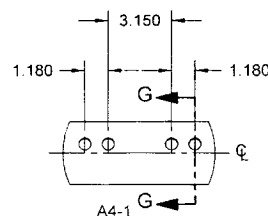
D2750-1 LH SKIDTUBE



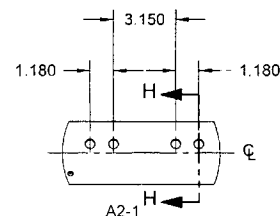
DETAIL A
SCALE 2X



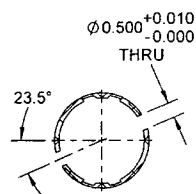
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SCALE 2X



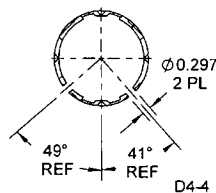
DETAIL C
SCALE 2X



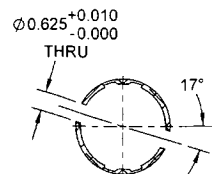
DETAIL D
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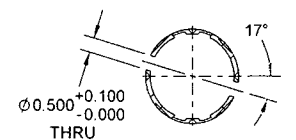
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

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Dart Aerospace Ltd

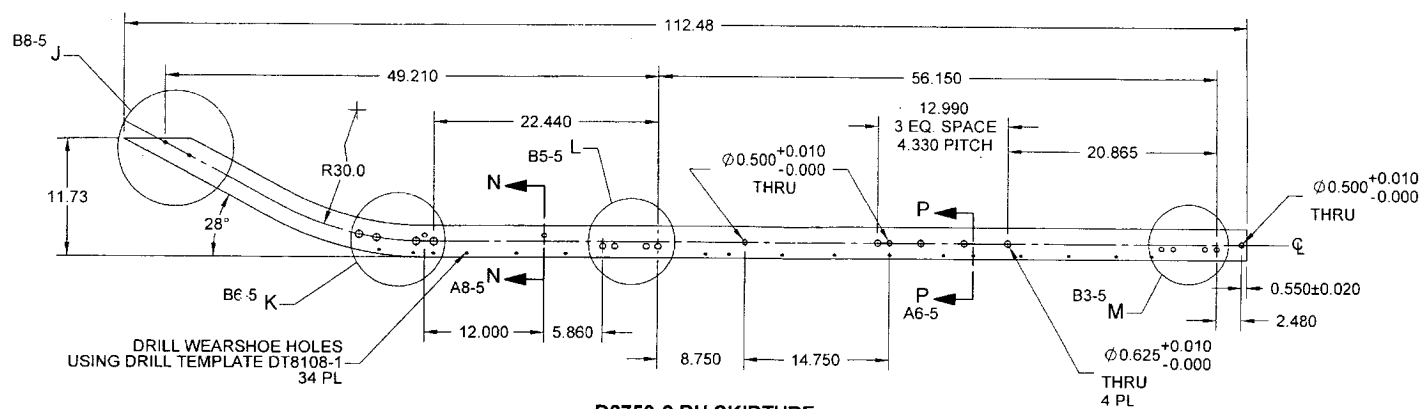
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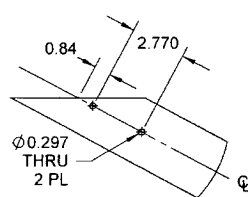
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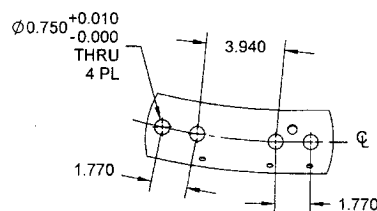
NOTE: Date & initial all entries



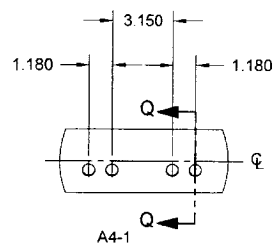
D2750-2 RH SKIDTUBE



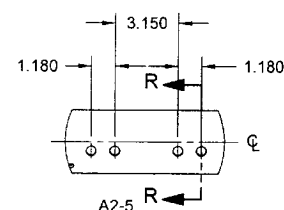
DETAIL J
SCALE 2X



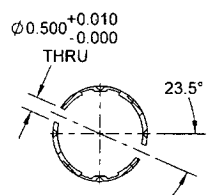
DETAIL K
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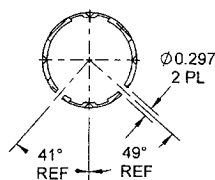
DETAIL L
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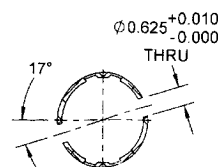
DETAIL M
SCALE 2X



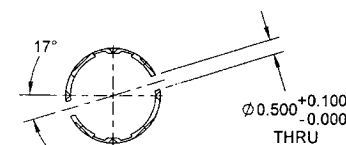
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

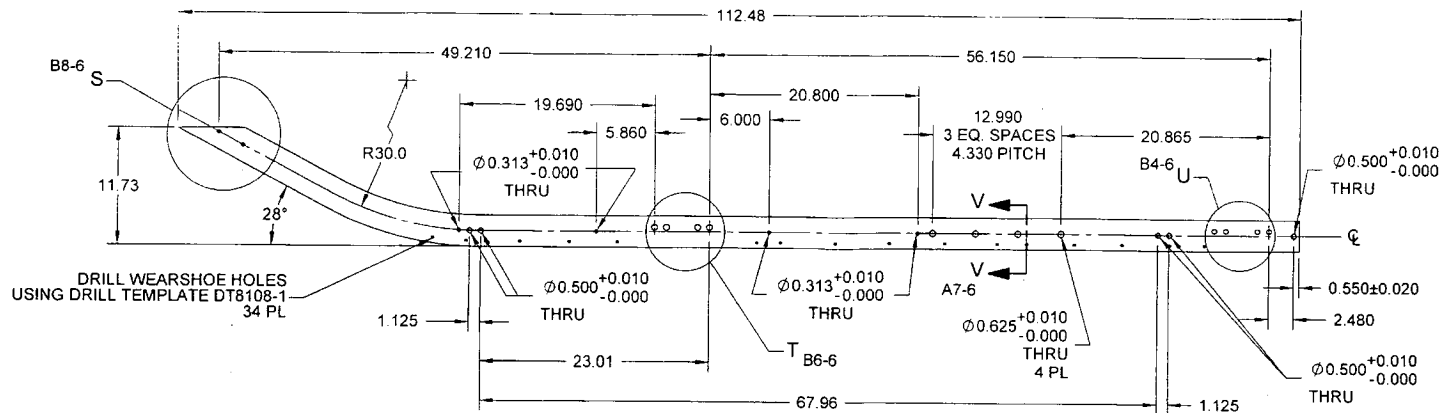
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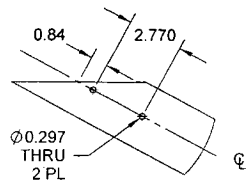
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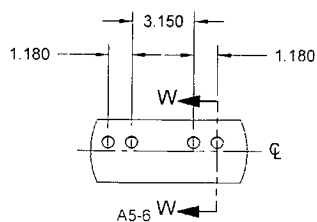
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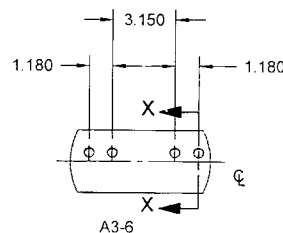
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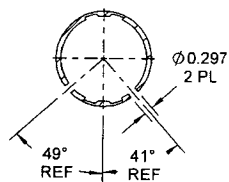
DETAIL S
D8-6
SCALE 2X



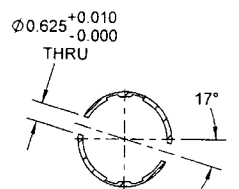
DETAIL T
C5-6
SCALE 2X



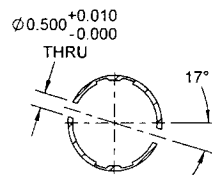
DETAIL U
D3-6
SCALE 2X



SECTION V-V
C4-6
SCALE 3X, 17 PL









SECTION W-W
B6-6
SCALE 3X, 4 PL



SECTION X-X
B4-6
SCALE 3X, 4 PL

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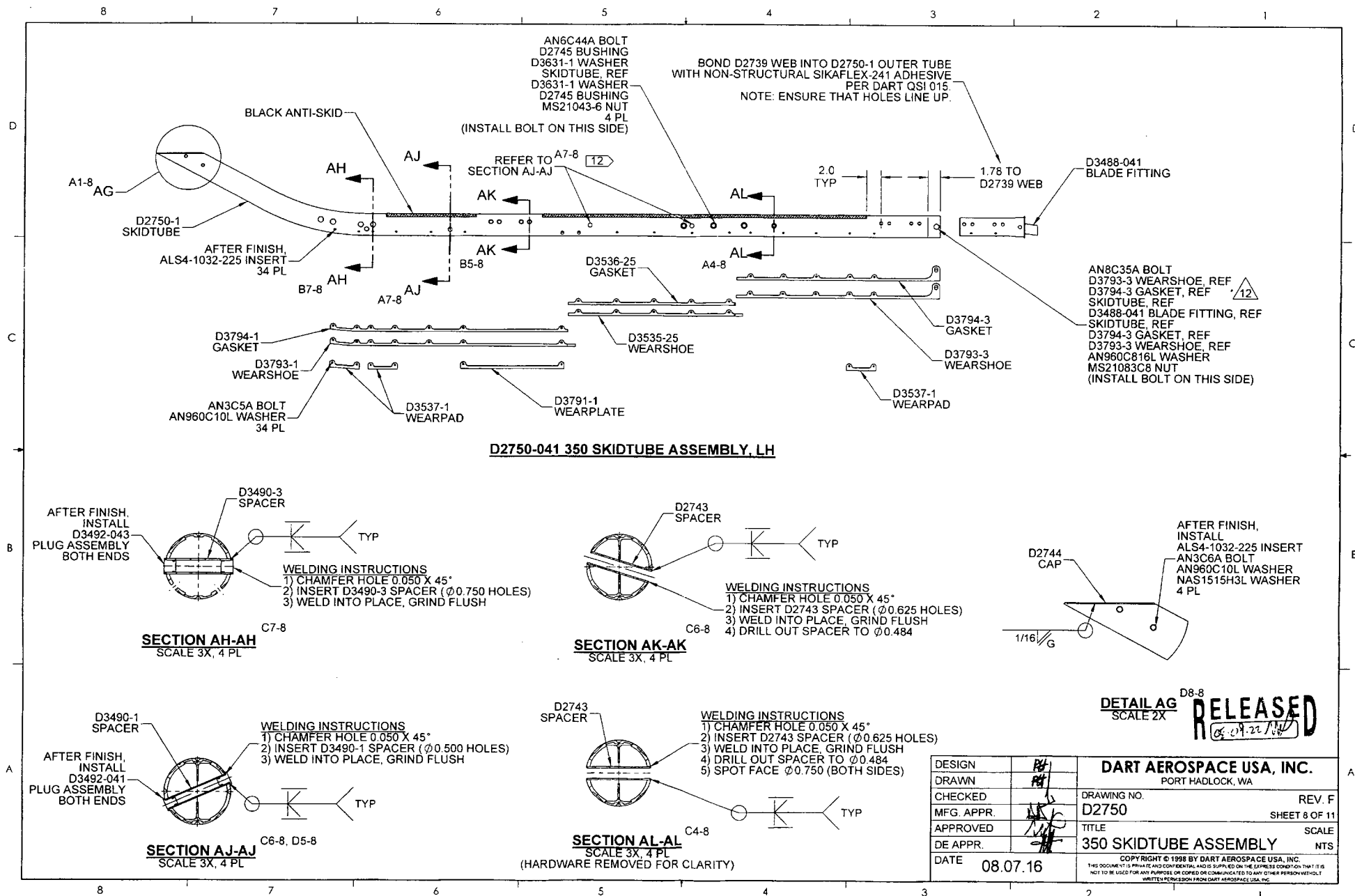
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

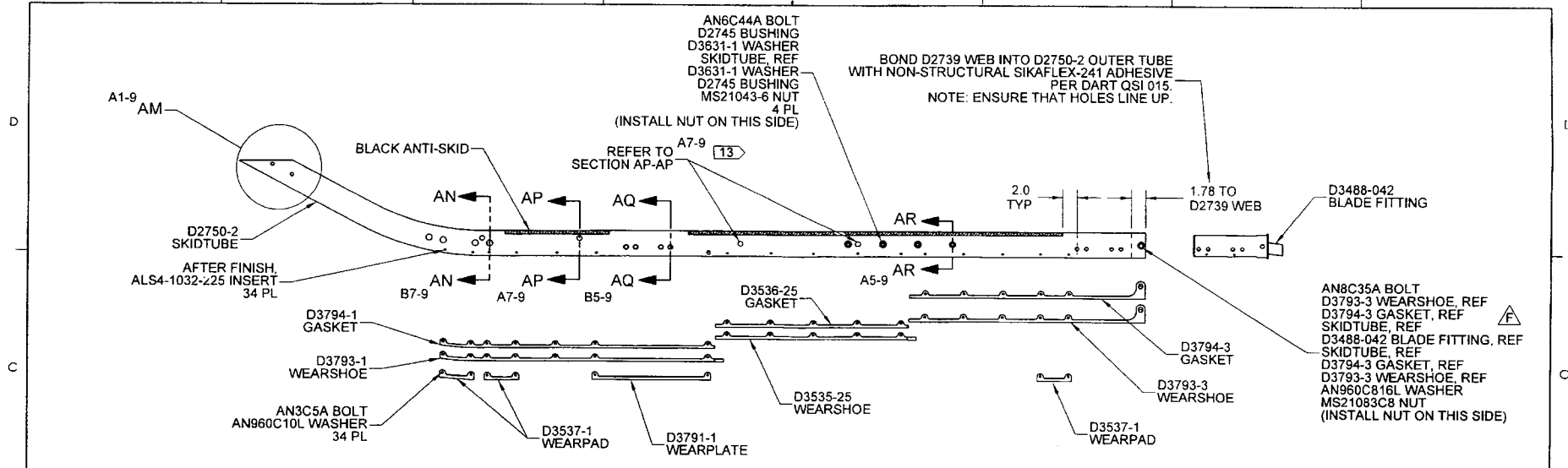
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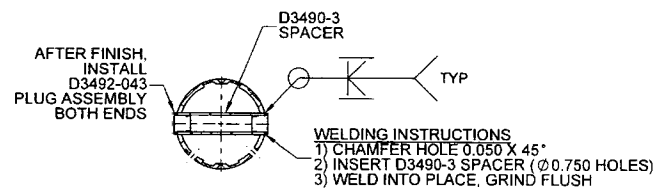
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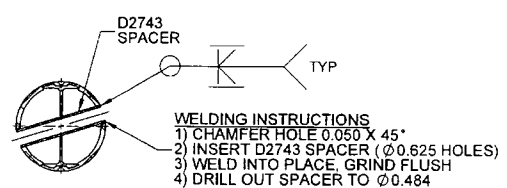
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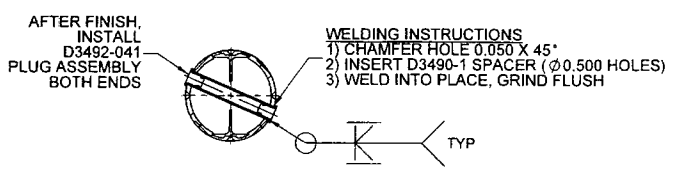
D2750-042 350 SKIDTUBE ASSEMBLY, RH



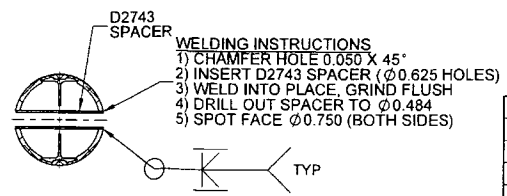
SECTION AN-AN
SCALE 3X, 4 PL



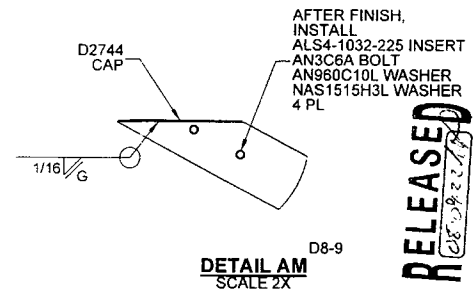
SECTION AQ-AQ
SCALE 3X, 4 PL



SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AM
SCALE 2X

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08-09-2016

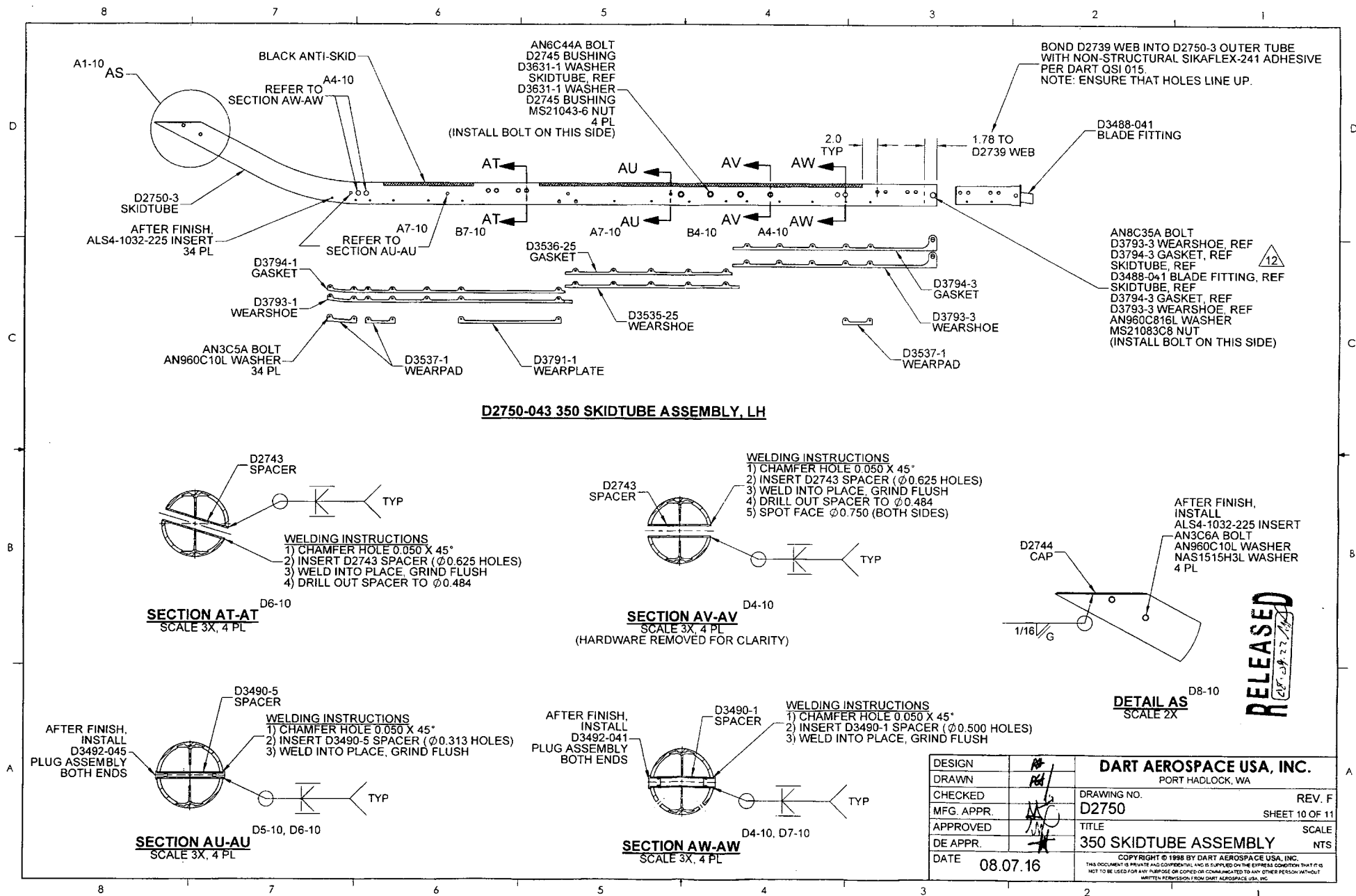
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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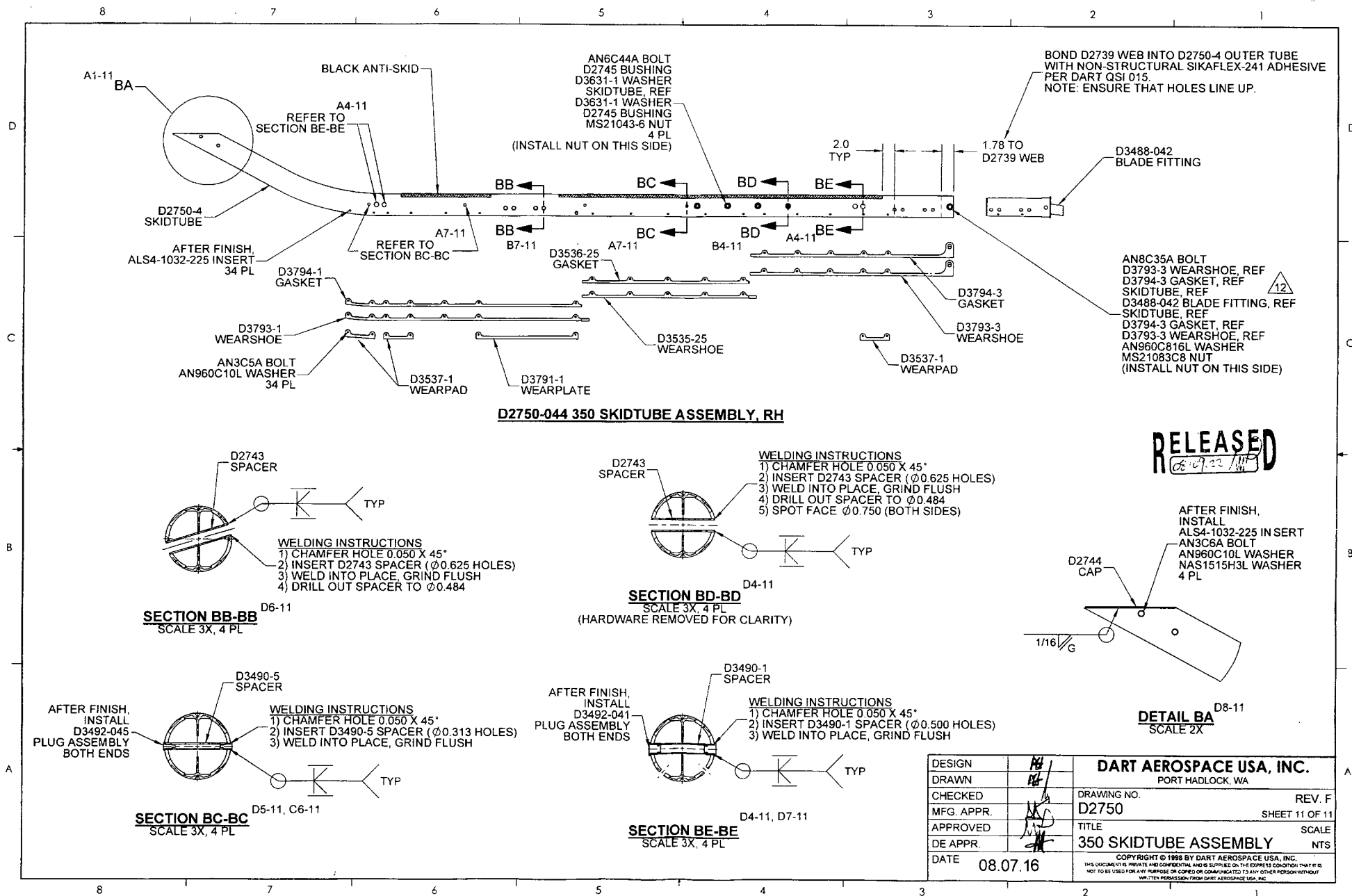
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W/O:

WORK ORDER CHANGES

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WORK ORDER NON-CONFORMANCE (NCR)

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NOTE: Date & initial all entries

NO. 298

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job #: 87012
Part #: A350-636-014
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum. in.
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:	pass[<input checked="" type="checkbox"/>]	fail[]
Incomplete Penetration:	pass[<input checked="" type="checkbox"/>]	fail[]
Incomplete Fusion:	pass[<input checked="" type="checkbox"/>]	fail[]
Cracks:	pass[<input checked="" type="checkbox"/>]	fail[]
Overlap (cold lap)	pass[<input checked="" type="checkbox"/>]	fail[]
Undercut:	pass[<input checked="" type="checkbox"/>]	fail[]
Pin holes:	pass[<input checked="" type="checkbox"/>]	fail[]
Porosity (surface):	pass[<input checked="" type="checkbox"/>]	fail[]
Coloration:	pass[<input checked="" type="checkbox"/>]	fail[]
Burn through:	pass[<input checked="" type="checkbox"/>]	fail[]

Qualifier David Reed Date of Test Coupon 12.07.23
Welder Barclay Elliott Date of Test Coupon 12-07-23

The above named individual is qualified in accordance with AWS D17.1.2001 to weld